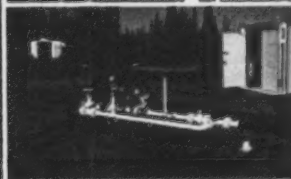


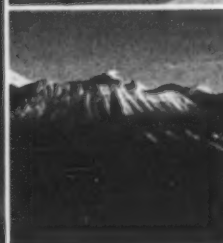


ISSUE 4 | JUNE | 2009

# Upstream Dialogue



**2009 Steward of Excellence Awards**  
Environment | Health & Safety | Social



## Inside:

**Industry in the News** [read more](#)

### Stewardship

The 2009 Steward of Excellence Award recipients are proving that our industry can advance environmental protection, economic growth, and a secure energy supply simultaneously. [read more](#)

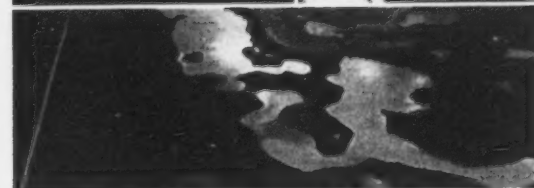
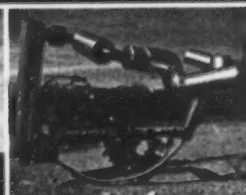
### Employee Perspectives

Hanna Janzen, Environmental Team Leader, is conducting leading-edge research on "soggy" ground in the boreal forest. [read more](#)

### Innovation and Technology

Learn about how Petro-Canada is using a Zero Liquid Discharge system to recycle water. [read more](#)

**Industry Practice and Regulations** [read more](#)





## Industry In the News

### "Oil and water do mix"

**May 12, 2009** - The Calgary Herald printed an op-ed titled "Oil and Water do Mix" by Greg Stringham, Vice President, Markets and Oil Sands at CAPP. Stringham writes, "Canada's oil and gas industry believes that environmental performance including responsible water use, economic growth, and energy security are necessary, achievable and need not be mutually exclusive."

The industry can back that position with measurable performance improvements and technological advances, including water recycling rates that across the oil sands industry are now 85 per cent or better."

The Federal Standing Committee on the Environment and Sustainable Development convened in Alberta to study oil sands and water resources on May 13.

CAPP and the Oil Sands Development Group made a joint presentation and several CAPP members added examples of environmental improvements by demonstrating their new technologies. The panel focused the discussion on current research findings in relation to water use in the oil sands and regional water quality, including the Athabasca River.

The Standing Committee will make recommendations on the degree of federal involvement in oil sands development. Dialogue between industry, government, and stakeholders is on-going.

- Read the Calgary Herald op-ed "[Oil and water do mix](#)"
- Read more information on CAPP's presentation to [Federal Standing Committee](#) including a background on Athabasca river water

### Maintaining momentum in BC's oil and gas sector

**May 7, 2009** - An article by Dave Collyer, CAPP President, was printed in the Issues & Ideas section of the Vancouver Sun. The article, "Maintaining momentum in oil and gas; The province's economic well-being and its economic recovery are tied to this industry", discusses how B.C. has benefited in many respects from growth in the oil and gas sector over the past few years. Collyer states that to maintain that momentum and realize future growth opportunities, industry strongly encourages the continuation of policies that strike the right balance between energy development, environmental performance and economic growth.

- Read the article "[Maintaining momentum in oil and gas](#)"

## Council of Canadian Academies releases water report

**May 11, 2009** - The Council of Canadian Academies, a national science advisory body, released a federally-commissioned report titled "Sustainable Management of Ground Water in Canada." The 337-page report includes a 10-page section on the oilsands. It indicates a need for more consistent data on regional ground water resources.

While industry and governments have extensive project based monitoring programs in place, together they are extending the regional monitoring networks. Alberta Environment is developing ground water management frameworks for both the Athabasca and Cold Lake regions. The oil sands industry is supportive of continuing to improve water monitoring processes on an ongoing basis.

- Read the Council of Canadian Academies report "[Sustainable Management of Groundwater in Canada](#)"





## Energy Tomorrow Radio

April 14, 2009 - The American Petroleum Institute (API) spoke with David Collyer, president of the Canadian Association of Petroleum Producers, about Canada's abundant deposits of oil sands and why they are important to the United States. The interview was broadcast on API's Energy Tomorrow Radio.

► Listen to the [Energy Tomorrow Radio interview](#)

## "Oilsands the wrong whipping boy"

May 20, 2009 - Journalist Deborah Yedlin, Calgary Herald, wrote an article that comments on recent action by Greenpeace to stop oil sands development in Alberta.

- Read Calgary Herald article ["Oilsands the wrong whipping boy"](#)
- Read more about the [Greenpeace campaign to stop the oil sands](#)

Industry In the News (continued)

## CERA Releases Oil Sands Report

May 18, 2009 - A major industry study has been released, "Growth in the Canadian Oil Sands: Finding a New Balance" by IHS Cambridge Energy Research Associates (IHS CERA).

The report offers a broad assessment of the benefits, risks, and issues associated with oil sands development.

Growth in the Canadian Oil Sands:  
Finding the New Balance



*Innovation has made it possible for the oil sands to move "from the fringe of energy supply to the centre." For example, "Since 2000 the amount of steam used in SAGD has been cut in half, significantly reducing GHG emissions on a per-barrel-of-output basis. As in the past, technology and process advancements will lead to greater efficiency and new ways of doing things, which in turn will enhance investment economics and improve the GHG footprint of the oil sands."*

- Excerpt from "Growth in the Canadian Oil Sands"

- The report explains the history of the oil sands and its place in the world oil market, and provides context for the debate across political, environmental, and technological dimensions.
- The report assesses a number of critical, but controversial, issues that are expected to shape the future of the oil sands.
- The report presents three scenarios that describe how the future of oil sands investment and attendant issues could evolve from 2009 to 2035. The goal is to illustrate a range of implications based on different assumptions about how the future could unfold.

The CERA study draws on eight months of research. Thirty-seven stakeholder organizations contributed to the study including Canadian and U.S. government agencies, oil companies, and environmental and community groups.

- Read the CERA report ["Growth in the Canadian Oil Sands: Finding a New Balance"](#)
- Read [CAPP's comments](#) on the CERA report findings
- Read National Post article ["Oil sands key to U.S. needs"](#) May 19, 2009







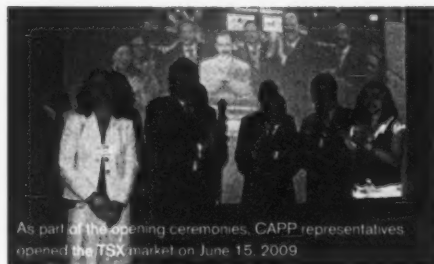
Industry In the News (continued)

## Energy in Action wraps up

May 28, 2009 – CAPP has successfully completed Energy in Action 2009. The program kicked off on May 5 in Redcliff, Alberta and travelled to 11 communities across Canada with the final event taking place in Conklin, Alberta.

In total, more than 600 elementary students participated. Together with community guests, teachers, principals, and 230 oil and gas company volunteers, students learned about energy development and environmental stewardship and then developed environmental projects in their own school yards. Participants planted more than 1,000 trees, shrubs, perennials and annuals.

Watch a video to learn more about Energy in Action

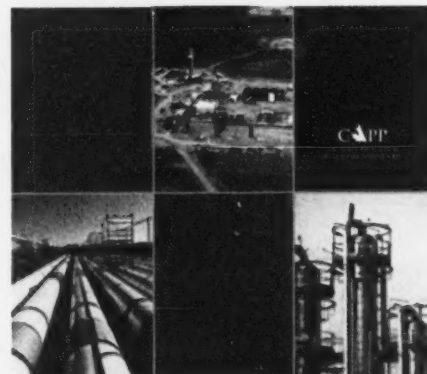


As part of the opening ceremonies, CAPP representatives opened the TSX market on June 15, 2009.

## 20th Annual Oil & Gas Investment Symposium

June 15, 2009 – CAPP kicked off the 20th annual Oil & Gas Investment Symposium in Calgary, Alberta. The event brings together member companies with hundreds of investors from Canada, United States and around the world.

- ▶ Read more about the [Oil & Gas Investment Symposium](#)
- ▶ If you weren't able to attend, company presentations are available via [webcast](#)



## Crude Oil Forecast, Markets & Pipeline Expansions

June 2009

## 2009-2025 Canadian Crude Oil Forecast and Market Outlook



June 5, 2009 – CAPP released its 2009 crude oil production forecast and markets and pipelines outlook.

Earlier this year CAPP conducted a survey of producers to determine planned production of oil through 2025. CAPP used this data along with other inputs to prepare its annual forecast, which this year provides both a Growth Case and an Operating & In Construction Case.

- ▶ Read the [CAPP news release](#)
- ▶ View the full-copy of the [2009-2025 Canadian Crude Oil Forecast and Market Outlook](#)





2009 Steward of Excellence Awards



#### Stewardship

## The Vision of Stewardship

CAPP's Stewardship initiative was created in 1999 to drive continuous improvement in the Canadian oil and gas industry's environmental, health and safety, and social performance.

The 2009 Steward of Excellence Awards recognize exceptional performance by CAPP member companies. This year's projects are evidence of the breadth and complexity of our industry and the many issues it faces. Nominations include technological innovations to reduce energy use, lower greenhouse gas emissions, and improve land reclamation, as well as projects to enhance relationships with stakeholders and protect workers from harm.

Steward of Excellence Award recipients have set new standards and are continuously redefining what responsible development means. The 2009 recipients are:



#### President's Award

### Devon Canada Corporation

*Reducing Pipeline Footprint Through Partnerships*

► [Learn more](#) about this project

Watch a video about this project





## 2009 Steward of Excellence Awards

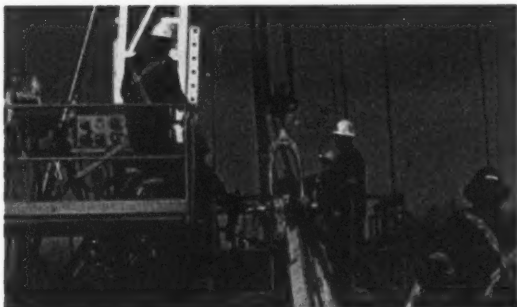
### Environmental Performance

## Canadian Natural Resources Limited

*Horizon Oil Sands Compensation Lake*

► [Learn more](#) about this project

Watch a video about this project



### Health and Safety Performance

## Imperial Oil Limited

*Contractor Safety: Improving More Than Statistics*

► [Learn more](#) about this project

Watch a video about this project



### Social Performance \*

## BP Canada

*A+ for Energy*

► [Learn more](#) about this project

Watch a video about this project



### Social Performance \*

## Nexen Inc.

*Balzac Crossfield Expansion Public Consultation*

► [Learn more](#) about this project

Watch a video about this project



Read more about all 28 of the [nominated projects](#)

\* Note: After considerable debate in this category, judges decide to present the Social Performance award to two deserving and very different projects.





## Employee Perspectives

# Collaborating on "soggy" ground

Name: Hanna Janzen

Title: Environmental Team Leader

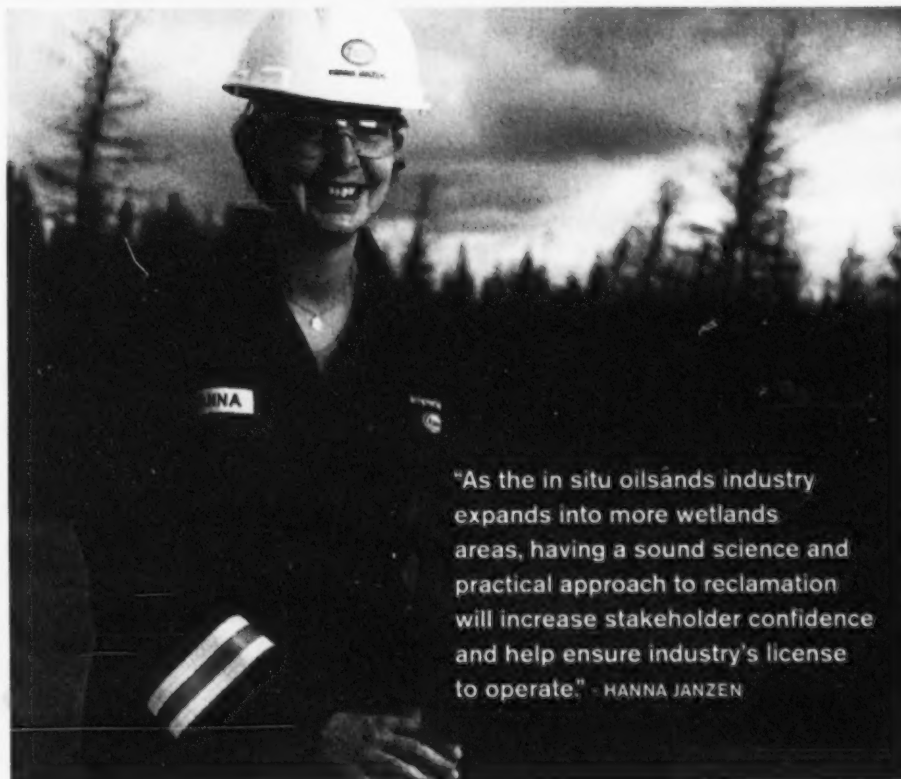
Company: Imperial Oil

Years of Experience: Seven

Location: Cold Lake

**Best part of the job:** "Variety! My job comprises a combination of technical and engineering challenges, engagement with stakeholders and the government, and constant communication about our environmental progress and plans."

**Success story:** Led a ground-breaking wetland reclamation project in the boreal forest.



"As the in situ oilsands industry expands into more wetlands areas, having a sound science and practical approach to reclamation will increase stakeholder confidence and help ensure industry's license to operate." - HANNA JANZEN

With approximately 4,000 wells drilled from more than 200 multi-well pads, Imperial Oil's Cold Lake operation is the largest thermal in situ, heavy oil operation in the world representing more than four percent of Canada's total oil production. The operation itself is on a 780-square-kilometre lease.

One of the complex, long-term challenges of working on a land area this size is the reclamation of well sites, many of which are situated on top of sensitive wetlands within the boreal forest [► sidebar].

Wetlands are important components of an eco-system, providing water storage and filtration, habitat and recreational benefits.

Hanna Janzen was the environmental team leader responsible for overseeing the development of the Cold Lake wetland reclamation trial, a pilot project that is evaluating the best ways to remove well pads when the wells have reached the end of their economic life. The goal is to do so in a way that allows the natural vegetation and wildlife to return to the area.

To determine the best way to tackle the problem, Hanna consulted with wetland

experts from Ducks Unlimited. "Our collaboration with Ducks Unlimited has been invaluable to this project. We greatly benefited from their expertise and we hope to continue working with them for years to come."

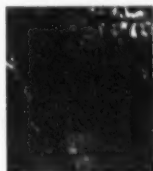
During construction of a well site, a geotextile liner and clay pad are placed over top of the wetland. Wells are then drilled from the pad to recover the oil that lies deep beneath. In December 2008, with technical advice from Ducks Unlimited and a well-thought-out reclamation action plan, Hanna and her team removed the clay overburden and liner from an old pad. She was pleased to see water returning immediately, as anticipated. Although the project is still in the early stages, initial indicators show that wetland habitat and vegetation are rebounding. Full restoration of the wetland may take several years.

Rick Shewchuk, head of wetland protection and restoration for Ducks Unlimited's western boreal program says the results could have huge implications for future reclamation efforts. "We're definitely talking about leading edge research here."

Hanna agrees and also points out that there are several more spin-off benefits from a project like this, including improved relations with stakeholders and the public.

Imperial Oil has seen the rewards that working with the experts can provide. The company continues its quest to find workable solutions for reducing the impact of operations on wetlands, partnering on other projects with the University of Alberta, Canadian Oilsands Research and Development (CONRAD), the forestry industry, and other in situ operators.

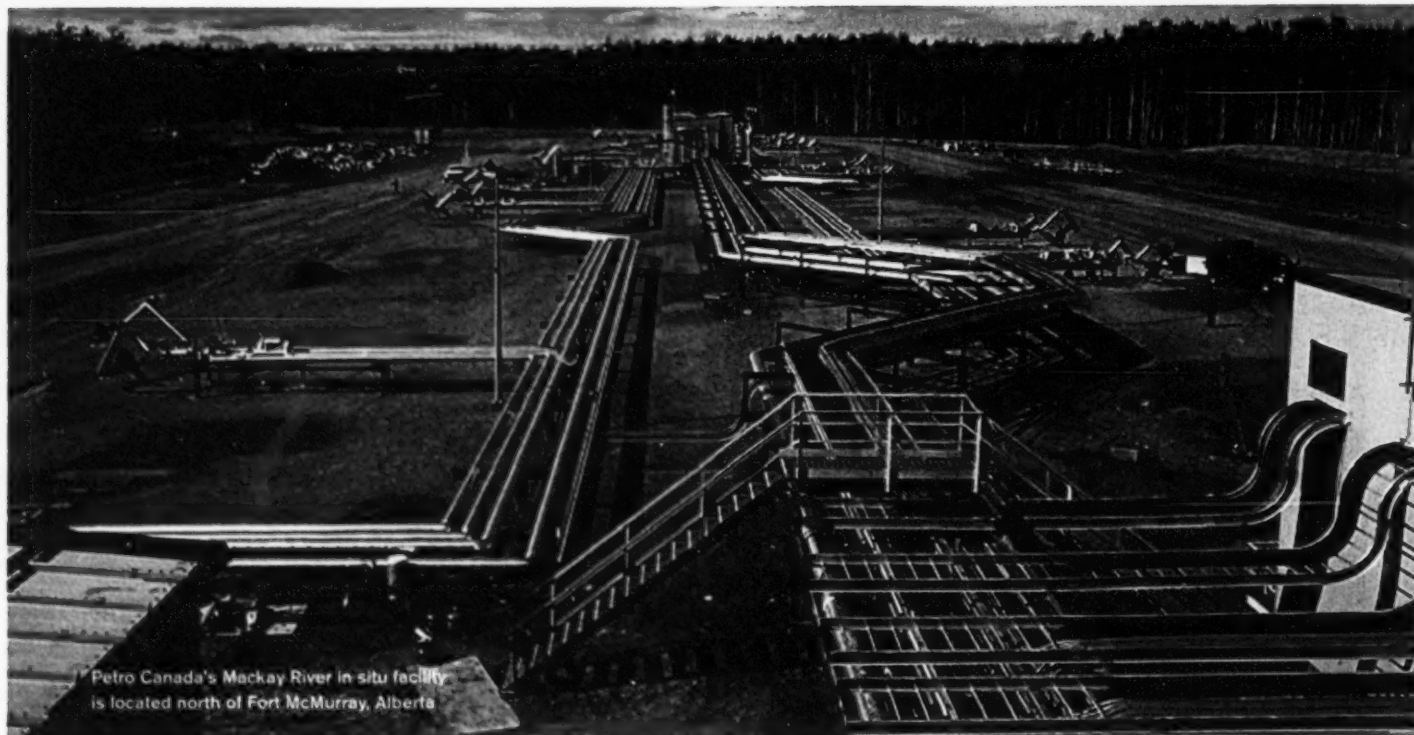
► Learn more about **Ducks Unlimited** in the western boreal forest



## ► The Boreal Forest

The boreal forest covers one third of Canada's land mass and contains one of the highest concentrations of wetlands in the country. Less than 0.1% of the forest has been disturbed by oil sands mining over the past 40 years.





Petro-Canada's Mackay River in situ facility is located north of Fort McMurray, Alberta

## Innovation and Technology

# Petro-Canada: Zero Liquid Discharge

Petro-Canada continuously recycles more than 90 per cent of the injection steam used to run its MacKay River in situ facility.

Like many in situ operators, Petro-Canada uses Steam Assisted Gravity Drainage [◆ sidebar] to extract bitumen.

More uniquely, the company has implemented a Zero Liquid Discharge system (ZLD) that makes it possible for Petro-Canada to recycle water at the facility as well as forgo the common approach of disposing waste water in an underground disposal well.

When bitumen is extracted, high-saline content water and condensed steam used in the process also enter the producer well. Many in situ operators dispose of

some of this saline water by pumping it into a disposal well underground, but Petro-Canada doesn't have a suitable disposal well nearby. So instead, the company devised the ZLD system, which treats the water to remove salts and then recycles the water to produce more injection steam. This way, the steam is continuously recycled and Petro-Canada has to draw very little water from underground aquifers.

Combining the ZLD system with MacKay River's low "steam-to-oil ratio" (that is: less water is required for steaming than at other projects), means that for every barrel of heavy oil produced, Petro-Canada uses about one-sixth of a barrel of new subsurface water.

► Read more about [Petro-Canada's Zero Liquid Discharge system](#)

## ◆ Steam Assisted Gravity Drainage (SAGD)

SAGD technology uses a pair of horizontal wells drilled at the base of the reservoir. Steam created from undrinkable water is injected into one well. It heats and mobilizes the bitumen deep underground, allowing it to flow to the surface via the second well (called the producer well).

[Learn](#) more about how CAPP members companies are using SAGD technology

# 85%+

The average recycling rate of water that the oil sands industry uses in production. This success is based on technological advances and performance measurement.

► [Learn](#) more about what the industry is doing to reduce water use.





## Climate Change Policy Direction

CAPP supports a made-in-Canada climate change policy that is developed with a continental and global perspective. Canada's unique geographic and economic circumstances, along with significant regional differences, make this particularly challenging. The world is preparing for the United Nations Climate Change Conference in Copenhagen in December 2009, with the objective of agreement on a new international climate change regime to replace the Kyoto protocol which expires in 2012. President Obama and the U.S. Congress are engaged in an effort to build a more robust American approach to climate change policy. The outcome of the Copenhagen meetings will likely largely depend on progress on U.S. domestic policy and on whether countries such as China, India and Brazil agree to participate in a new agreement.

- **Learn more** about the principles CAPP is advocating to guide the development of Canadian climate change policy.

### Industry Practice and Regulations

## Land Matters Consultation Initiative

In January 2008 the National Energy Board (NEB) developed the Land Matters Consultation Initiative (LMCI) in response to increasing landowner and community concerns in regards to pipeline issues. NEB created an approach which included four streams:

**Stream 1 - Company Interactions with Landowners**

**Stream 2 - Improving the Accessibility to NEB Processes**

**Stream 3 - Pipeline Abandonment - Financial Issues**

**Stream 4 - Pipeline Abandonment - Physical Issues**

In May 2009, the NEB released its decision in regards to Stream 3. The key issue was determining the optimal way to ensure that funds are available when pipeline abandonment costs are incurred. The decision stated the goal is to have all companies that own pipelines regulated by NEB set aside funds to cover pipeline abandonment costs.

The Stream 3 Action Plan, which outlines the next steps, will be of interest to several CAPP member companies, specifically those owning Group 2 pipelines. The Action Plan summary for Group pipelines is as follows:

<b>NEB Technical Conference</b>	<b>November 2009</b>
<b>Group 2 pipelines prepare estimate of abandonment costs</b>	<b>November 2011</b>
<b>Group 2 pipelines file proposal for collections of funds</b>	<b>November 2012</b>
<b>Group 2 pipelines file proposed process and mechanism to set aside funds for pipeline abandonment</b>	<b>May 2013</b>

- Read NEB document **Reasons for Decision: Land Matters Consultation Initiative Stream 3** which includes the full Action Plan
- Read NEB document **Final Report: Land Matters Consultation Initiative Streams 1, 2 and 4**



## Industry Practice and Regulations (continued)

# ERCB Water bodies draft directive

On February 10, 2009 the Energy Resources Conservation Board (ERCB) released draft Directive: Oil and Gas Development Within or Proximal to Water Bodies.

The draft directive sets out requirements for identifying and delineating water bodies and a methodology to determine if a new and existing oil and gas development will meet the water body setback requirements. Setback distances have been established to separate water bodies from industry development.

CAPP was given the opportunity to review and comment on the draft and has advised we have significant concerns regarding intent and implementation. Specifically, the draft directive does not clarify the definition of water bodies and is inconsistent with the Draft Wetland Policy and the existing Environmental Protection and Enhancement Act (EPEA) approval requirements. The ERCB and Alberta Environment are currently reviewing industry feedback but early indications suggest our concerns have resonated at senior levels.

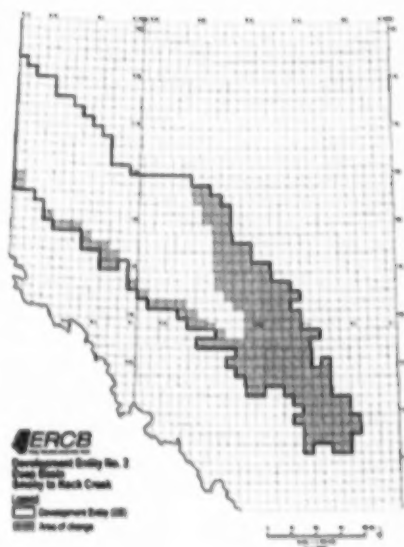
- ▶ Review the [draft Directive](#)
- ▶ Review the accompanying [ERCB bulletin](#)

## Alberta's Deep Basin development expansion

On April 28, 2009 the Energy Resources Conservation Board (ERCB) announced an expansion of the Deep Basin development area (Development Entity 2) in Alberta. This development entity allows for commingling of the stacked tight gas sands with reduced testing obligations across 275 townships. The expansion includes an additional 189 townships.

The push to expand the development potential in the Deep Basin area is part of an industry initiative to increase Alberta's natural gas production and total royalty revenue. The Deep Basin area presents a significant opportunity for unconventional gas production.

- ▶ Review the [ERCB bulletin](#) announcing the expansion



# Offshore import duties moratorium granted

Since July 2008, CAPP has sought an extension for the moratorium on import duties for foreign built mobile offshore drilling units (MODUs). The moratorium was set to expire in May 2009. The lobby effort involved numerous meetings with government departments, the provincial governments in Newfoundland and Labrador and Nova Scotia, supply and service industry associations in these provinces and in Alberta, and the Shipbuilding Association of Canada. CAPP recently received a letter from Federal Department of Finance indicating that this extension has been granted and the moratorium extended until May 2014.

The import duty was originally applied to foreign MODU's to protect Canadian ship fabricators who, it was anticipated, would build the MODU's. However, no Canadian companies produced these units so the duty did not serve its purpose. The Canadian government is reluctant to eliminate the duty entirely. The duty does not apply to U.S. built MODUs due to the free trade act.

Savings on the duty reduces the overall cost of drilling activity, making it more competitive and encouraging exploration activity in Eastern Canada. Operators who use foreign MODU's will save approximately \$1 million per offshore well.



## Canadian Association of Petroleum Producers (CAPP)

The Canadian Association of Petroleum Producers (CAPP) represents 130 companies that explore for, develop and produce natural gas, natural gas liquids, crude oil, oil sands, and elemental sulphur throughout Canada. CAPP member companies produce more than 90 per cent of Canada's natural gas and crude oil. CAPP also has 150 associate members that provide a wide range of services that support the upstream crude oil and natural gas industry. Together, these members and associate members are an important part of a \$120-billion-a-year national industry that affects the livelihoods of more than half a million Canadians.

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If you would like to receive this newsletter directly from CAPP, email your request to [communication@capp.ca](mailto:communication@capp.ca).

### TELL US YOUR SUCCESS STORY

We are looking for employee stories to publish in our Employee Perspectives section.

If you know of a CAPP member company employee who has taken a leading role in an innovative company project, they may be eligible for feature in Upstream Dialogue. Please submit a brief bio, any existing published stories, and appropriate contact details about the employee to [communication@capp.ca](mailto:communication@capp.ca).

### FEEDBACK

Your feedback, questions and/or comments are always welcome. Your input is important as we work to provide you with information about Canada's oil and gas industry.

► Send us your feedback

